Nickoloff Entrepreneurial Faculty Fellows 2019 Program (Pending funding)

Detailed Program:

Our goal is to create the Nickoloff Entrepreneurial & Innovation Faculty Fellowship program to provide focused and strategic faculty involvement, allowing Mines to establish an active, collaborative network of colleagues who are informed and enthusiastic about integrating an entrepreneurial mindset into their teaching and research. Tom Nickoloff has donated funds to the Center for Entrepreneurship & Innovation to create the next cohort of this Faculty Fellowship program. As the latest addition to Mines’ path to distinctiveness, this Fellowship is intended to distinguish and honor innovative and entrepreneurial faculty. The overall objective of this program is to:

- Recruit key faculty as “Nickoloff Entrepreneurial and Innovation Fellows,” who would then act as catalysts for the incorporation of KEEN Entrepreneurial Engineering concepts and principles (https://engineeringunleashed.com/).
- Provide students with a new way of problem solving—entrepreneurial mindset using KEEN principles and content. Nickoloff Entrepreneurial Faculty Fellows can update existing curricula or create new ones.
- Provide enough basic material in a highly interactive format so both faculty and students understand the key processes and techniques of entrepreneurial thinking.

Program goals, expectations, milestones and success metrics:

Faculty Entrepreneurship Bootcamp (May 6 – 10, July 8-12, Aug 5-9):

This 3-week “Entrepreneurial Bootcamp” includes hands-on workshops and interactive seminars by intrepreneurs from large companies and entrepreneurs from small start-ups together with enough basic material in the areas of teams and leadership, strategy and management, markets and market research, intellectual property, finance, production, oral presentations, networking and funding so that the Faculty Fellows can become entrepreneurial thinkers. Ample time is allocated for active discussions, team activities and creating new content for entrepreneurially minded students.

E&I Faculty Fellows Goals and Performance Metrics:

- Each Nickoloff Entrepreneurial Fellow will receive an award of $10,000 in their professional development account to facilitate their involvement in the program.
- Nickoloff E&I Fellow attends a summer workshop entitled “Faculty Entrepreneurship Bootcamp” and presents an elevator pitch based on their team’s project as well as a “Lessons Learned” presentation outlining the key learning objectives captured through their team’s project during the bootcamp.
- Nickoloff E&I Fellow attends at least one KEEN Integrating Curriculum with Entrepreneurial Mindset (ICE) Workshop to learn the process of integrating entrepreneurial content into an established curriculum.
- Nickoloff E&I Fellow prepares at least one module for deployment within their academic curriculum that demonstrates key entrepreneurial principles. Modules are developed in consultation with E&I Center staff and KEEN and are reviewed prior to dissemination. Modules developed in this program may be deployed by other KEEN-affiliated universities.
5. Nickoloff E&I Fellows teach the deployed modules in their normal courses, and possibly work with KEEN for dissemination of the module throughout the network.

**E&I Host Department Goals and Performance Metrics:**

1. A Department that receives E&I Fellows agrees to highlight E&I activities, allow and encourage faculty, staff and students to participate in such activities (both curricular and extracurricular) and support the development of E&I programs.

2. A Department that receives E&I Fellows agrees to hold at least one departmental event annually that features E&I content, whether it is a seminar, workshop, competition or host an external E&I speaker.

3. A Department Head so involved agrees to encourage participation of their faculty in E&I programs and to highlight such performance in faculty performance reviews and reward faculty for their participation in such events.

**Program Sustainability and Success Metrics:**

**E&I Center Goals for Faculty E&I Participation are:**

1. Our primary goal is to create a set of core faculty to serve as Entrepreneurial Catalysts within each department at Mines. Therefore, we hope to include a minimum of 10% of the active faculty (roughly 30 teaching and tenure-track faculty) at first. At six faculty per cohort, this will require roughly 5 years for saturation.

2. Our secondary goal is to incorporate entrepreneurial thinking content into all academic curricula offered to undergraduates by the university. We can accomplish this in two ways:
   
   a. Cross disciplinary courses: Courses like EPICS 151 (Cornerstone) are required for all Mines undergraduates and are taught by one program (currently, EDS, Engineering Design for Society). These courses are taught primarily by Adjunct Faculty who already have entrepreneurial experience, and we will provide additional content and train these faculty to teach entrepreneurial thinking (coordinated through Prof. Leslie Light, course director).
   
   b. Discipline-specific courses: Since this content is primarily regulated by departments, if we include 2 departments per cohort, we will reach ten departments in five years. While this is not 100% participation, it should reach >95% of the undergraduate student population within 5 years.

3. Our tertiary goal is to identify entrepreneurial research faculty, postdocs and graduate students who are interested in identifying and promoting commercialization of unique research ideas. Initially, this can be accomplished using existing NSF i-Corps (or NREL Lab-Corps) and DoD H4D (Hacking for Defense) programs. We have been selected as a site for H4D deployment beginning in January, 2019 and Prof. Sid Saleh has been trained as an H4D instructor. We are working with the VPRTT (Stefanie Tomkins) and the Alumni Association to encourage faculty and alumni to participate in these programs.

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